REMARKS/ARGUMENTS

Favorable reconsideration of the application in view of the following remarks, is respectfully requested. Claims 1-13 are currently pending in the application.

By way of summary, Claims 1-5, 8, 9 and 13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Takehara et al. (U.S. 2002/0067628, hereinafter "Takehara") in view of Hulick (U.S. 4,804,931). Claim 7 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Takehara in view of Hulick and Suzui et al. (U.S. 2002/0085397, herein "Suzui"). Claims 6 and 10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Takehara and Hulick in view of Ragsdale (U.S. 5,280,404). Claim 11 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Takehara and Hulick in view of Madenokouji et al. (U.S. 6,046,919, herein "Madenokouji"). Claim 12 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Takehara in view of Hulick and Sarin (U.S. 5,838,947).

At the outset, Applicant notes that each of the rejections relies in-part on the reference to Hulick. For reasons which follow, Applicant believes that Hulick is not analogous art, and if analogous, would not have made up for the deficiencies of Takehara.

As set forth in M.P.E.P. § 2141.01(a) titled "Analogous and Nonanalogous Art" to rely on a reference under 35 U.S.C. § 103, the reference must be analogous prior art. The Examiner must determine what is "analogous prior art" for the purpose of analyzing the obviousness of the subject matter at issue. As eloquently stated by Judge Newman in the case of *In re Wood*, 202 USPQ 171, 174 (CCPA 1979) "[t]he determination that a reference is from nonanalagous art is therefore twofold. First we decide if the reference is within the field of that inventor's endeavor. If it is not, we proceed to determine whether the reference is reasonably pertinent to the particular problem with which the inventor was involved."

The field of endeavor of the present invention is a power supply apparatus including a system linkage inverter for transforming the voltage of either a DC power supply or an AC power supply. In contrast, the field of endeavor of Hulick is a digital amplitude modulator for use in transmitting information signals in the context of AM audio and AM video. Thus, it is clear for persons of ordinary skill in the art that the Hulick reference is from a different field of endeavor.

In addition, the problem that the inventor was trying to solve is the difficulty in accurately supplying the dummy load with excess electric power, other than electric power consumed by the line load, of the electric power output that is generated at a substantially constant pace. On the other hand, the problem that Hulick is trying to solve is a need for an amplitude modulation system which is capable of operation at any carrier frequency using any of the many classes of amplifiers as an RF source. Accordingly it is clear that Hulick is not reasonably pertinent to the problem the inventor was trying to solve. In view of this, Applicant believes that the Hulick reference is non-analogous and should be removed from the prior art applied against Applicant's claims.

In any event, assuming *arguendo* that Hulick could somehow be considered to be analogous prior art, the key to supporting any rejection under 35 U.S.C. § 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR* noted that the analysis supporting the rejection under 35 U.S.C. should be made explicit. The Court quoting *In re Khan*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006) stated that "[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning support to legal conclusion of obviousness. The examples of articulated reasoning set forth in the M.P.E.P. include "[F] known work in one field of endeavor may prompt variations of it for use in either the same field or a different field based

on design incentives or other market forces that the variations are predictable to one skilled in the art." The M.P.E.P. goes on to state, with respect to "F" that:

> To reject a claim based on this rationale, Office personnel must resolve the *Graham* factual inquiries. Then Office personnel must articulate the following: (1) a finding that the scope and content of the prior art, whether in the same field of endeavor or as that of the Applicant's invention or a different field of endeavor, include a similar or analogous device; (2) a finding that there were design incentives or market forces which would have prompted adaptation of the known device; (3) a finding that the differences between the claimed invention and the prior art were encompassed in known variations or in a principle known in the prior art; (4) a finding that one of ordinary skill in the art, in view of the identified design incentives or other market forces, could have implemented the claimed variation of the prior art, and the claimed variation would have been predictable to one of ordinary skill in the art.

From a review of the Official Action, Applicant does not find the articulation of the above-mentioned four points. In particular, there is no articulation of any design incentives or market forces which would have prompted adaptation of the known device, or any articulation that the differences were encompassed in known variations or in a principle known in the art. Nor is there any articulation that a review of identified design incentives or other market forces which could have implemented the claimed variation of prior art and the claimed variation, would have been predictable to one of ordinary skill in the art.

Rather, the sole reason found in the Official Action (page 3) was to provide a cascade topology as taught by Hulick. However, there is no articulated reasoning to establish that an artisan would have found design incentives, market forces, etc., which would have prompted adaptation of the reference to Takehara.

In addition, from Applicant's review of Hulick, Applicant finds the reference relates to a digital amplitude modulator for use in transmitting information signals in the context of AM audio and AM video or any other modulation source for the purpose of generating amplitude modulation. See column 2, lines 62-66. It is primary object of the invention of Hulick to process an amplitude modulator/transmitter that uses any class of amplifier to

provide the RF signal sources. Another object of the invention is to be able to generate AM at any carrier frequency since switch-mode signal sources are not necessary. See column 3, lines 43-55.

As disclosed in Figure 1 of Hulick, input ports 1, 2, 3 and 4 are shown in a description of a quadrature hybrid four-port device. Hulick discloses that the ports terminate in RF connectors, and that the output of port 3 is 90° out of phase with respect to ports 1 and 2. If properly dimensioned, port 1 splits equally with ports 2 and 3. If ports 2 and 3 are properly terminated, there is no power to port 4. For different mismatches at 2 and 3, some power is reflected back to port 1. If the loads connected to ports 2 and 3 are expected to be perfect, then port 4 is not needed. See col. Col. 6, line 11 through col. 7, line 13).

Turning to Figure 5, it is disclosed that if unequal power is supplied to ports 1 and 2, some power is lost to dummy load 3 which is the isolated port. See col. 7, lines 38-45. In Figure 14, which is relied upon in the Official Action, source 36 is a microphone or video generator and a signal goes through AD converter to data line 40 where the data is in four-bit words. The least significant bits LSB are inputted to gate 42, and the output of RF signal generator 46 is amplified in amplifier 44 and then outputted to gate 42. It is also disclosed that each gate is two times the output of the gate to the right of it. See col. 5, lines 3-33. Moreover, the output of gate 42 is fed to port 4 of the combiner. In addition, the second input port to the combiner is input port 1 which has an initial value. Output port 2 is 90° out of phase with the input port and is noted as carry input 33. See col. 5, lines 28-31). Moreover, port 3 connects to a dummy load. See col. 5, line 6. The combiners are cascaded and output to load 52 which is actually an antenna and a filter (see column 5, lines 40-41).

In the description of Figure 5, which shows the quadrature hybrid power device being used as a power combiner 62, Hulick states that "If a quadrature hybrid device is constructed to be a 3 dB splitter or combiner, power is either split equally in amplitude to two ports or is

combined completely from two equal amplitude ports. Should the power levels be unequal in the two input ports of a combiner, some power will be lost in the isolation port dummy load. This load is often referred to as a reject load" (see column 7, lines 38-45). From this description in Hulick Applicant finds that the use of the isolation port dummy load (or reject load) is used in a combiner when the power levels of the two input ports are unequal. This is completely different from Applicant's invention in which an excess power is shunted to the dummy load to prevent power from going back through the power source 20.

Accordingly from all of the above, in addition to the Hulick reference being non-analogous art, the disclosure of Hulick would not make up for the basic deficiencies of the primary reference to Takehara. Accordingly, Applicant believes that even if the reference to Hulick was analogous, there is no teaching or suggestion to combine the teachings of Takehara with Hulick other than through a hindsight reconstruction of Applicant's invention. Because all of the

rejections rely upon Hulick, Applicant's consider each of the rejections to be in error. Accordingly, Applicant's believe that each of Claims 1-13 are now in condition for allowance. An early indication to that effect is respectfully requested.

Respectfully submitted,

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